

REMARKS

I. Introduction

Claims 7 to 12 are currently pending in the present application. In view of the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration of the present application is respectfully requested.

Applicants thank the Examiner for considering the previously filed Supplemental Information Disclosure Statement, PTO-1449, and cited references.

II. Rejection of Claims 7 to 12 Under 35 U.S.C. § 103(a)

Claims 7 to 12 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,561,435 ("Kluegl"). Applicants respectfully submit that Kluegl does not render unpatentable the present claims at least for the following reasons.

Claim 7 recites, *inter alia*, the following:

... the at least one retaining flange extending over only a portion of a perimeter of the fuel injector.

As regards the "at least one retaining flange" of claim 7, the Office Action relies on peripheral cylindrical collar 5 shown in Fig. 1 of Kluegl, and asserts that it would have been obvious to modify the collar 5 of Kluegl so that it would extend over only a portion of a perimeter of the fuel injector shown in Fig. 1.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993). To establish *prima facie* obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. *In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091 (Fed. Cir. 1986). The reasonable expectation of success must be found in the prior art, and must not be based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488. Third, the prior art reference(s) must teach or suggest all of the claim limitations. *In re Royka*, 490 F.2d 981 (C.C.P.A. 1974).

The Office Action has not met this burden. In particular, the Office Action has not presented a single reference that discloses, or suggests, a flange that extends over only a portion of a perimeter of fuel injector, and has not provided any support for the proposition that there was a reasonable expectation of success for modifying the collar 5 of Kluegl to extend over only a portion of a perimeter of a fuel injector, as the Office Action suggests.

The Office Action apparently contends that there are two reasons that it would have been obvious to modify the collar 5 of Kluegl to extend over only a portion of a perimeter of the fuel injector, rather than around the entire perimeter. The first reason alleged is "so that the entire injector is pressed axially downward into a corresponding receiving bore in the cylinder head of the internal combustion engine." Respectfully, as described in Kluegl, the clamping claw A presses axially downward from above into the peripheral collar 5, with the result that the entire injector is pressed axially downward into a corresponding receiving bore." Col. 3, lines 12-15. Thus, the reason that the **peripheral collar 5** is provided is so that the entire injector may be axially pressed down by the clamping jaw. This does not provide any motivation for modifying the collar 5 to extend over only a portion of the perimeter. That is, it does not appear that modifying the collar 5 so that it extends over only a portion of the perimeter would provide any benefit with respect to pressing down the injector.

The second reason propounded by the Office Action is "to reduce the manufacturing cost of the fuel injector." Respectfully, as shown in Fig. 1, the cylindrical collar is formed in one piece (is integral with) the injector housing 2. There is no suggestion in Kluegl that modifying the collar 5 to extend over only a portion of the perimeter would, in fact, reduce manufacturing costs. Indeed, it appears that it would either be the same cost or more (due to the more complicated design), to manufacture the fuel injector. In any event, there is no suggestion in Kluegl that this modification would reduce manufacturing costs.

Furthermore, a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). Kluegl states that a copper disk B is arranged between a lower end face of the injector and a bottom face of a receiving bore that receives the collar 5, in order to seal the receiving bore. Col. 3, lines 17 to 19. As

illustrated in Fig. 1, the lower end face of the injector is a lower end face of the collar 5. Thus, the collar 5 of Kluegl is apparently used to secure a seal that seals a receiving bore. This tends to suggest that the collar 5 should extend over the entire perimeter of the fuel injector in order to adequately apply pressure to the disk B in order to seal the entire perimeter of the fuel injector within the receiving bore. Thus, Kluegl teaches away from the claimed invention.

Furthermore, if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there would be no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900 (Fed. Cir. 1984). As indicated above, it is possible that the disk B of Kluegl would be rendered unsatisfactory for its intended purpose if the collar 5 of Kluegl were to be modified to cover only a portion of a perimeter of the fuel injector. Thus, there is no suggestion or motivation to make the proposed modification.

It is therefore respectfully submitted that Kluegl does not render unpatentable claim 7.

As for claims 8 to 12, which ultimately depend from claim 7, it is respectfully submitted that Kluegl does not render unpatentable these dependent claims for at least the same reasons given above in support of the patentability of claim 7.

Withdrawal of the rejection of claims 7-12 under 35 U.S.C. § 103(a) is, therefore, requested.

III. Conclusion

In light of the foregoing, it is respectfully submitted that all of the presently pending claims are allowable. Prompt reconsideration and allowance of the present application are therefore earnestly solicited.

Respectfully submitted,

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